



Newborn Screening Quality Assurance Program

PROFICIENCY TESTING PROGRAM FOR ANTI-HIV-1 IN DRIED BLOOD SPOTS

Quarterly Report

Quarter 1

February 2005

For the first quarter of 2005, we received data reports for 43 HIV-1 proficiency testing (PT) panels from 37 participants. Participants conducting screening analysis reported one false-negative misclassification, and those conducting confirmatory analysis reported no misclassifications.

The PT panel for Quarter 1 consisted of five individual-matrix dried-blood spot (DBS) specimens. In Part 1 of the report, Table 1 shows the number of laboratories using each screening method/kit; Table 2 shows the expected results and the number of laboratories reporting reactive and non-reactive results; and Table 3 summarizes EIA absorbance ranges and means by specimen number and method of analysis (representative data are shown for three kits). Table 3 also shows the results obtained by CDC.

In Part 2 of the report, Table 4 shows the number of laboratories using each confirmatory method/kit; Table 5 shows the expected results, number of laboratories reporting reactive, non-reactive, or indeterminate results, and number of laboratories not reporting confirmatory results; and Table 6 shows the band classifi-

cations by method of PT specimens that tested positive for HIV-1 initially and after repeat EIA analysis (representative data are shown for two methods). Table 6 also shows the results obtained by CDC.❖

The Quality Assurance Program will ship next quarter's HIV-1 DBS proficiency testing specimens on April 11, 2005, and the next major allotment of HIV-1 DBS quality control specimens on July 18, 2005.❖

The 2005 APHL Infectious Disease Conference will be held March 2-4, 2005, at the Grosvenor Resort in Orlando, Florida. This forum will provide the latest in laboratory diagnostics for a range of infectious diseases of public health significance. For information, visit http://www.aphl.org/National_Conferences/2005_Infectious_Disease_Conference/.❖

The 2005 National HIV Prevention Conference will be held June 12-15, 2005, at the Hyatt Regency Atlanta, in Atlanta, Georgia. This conference of governmental and non-governmental organizations offers opportunities to share prevention approaches and research findings and to strengthen collaborations between

program practitioners and researchers. For more information, visit www.2005shivprevconf.org.❖

SpotLight

CDC's initiative, *Advancing HIV Prevention: New Strategies for a Changing Epidemic*, is aimed at reducing barriers to early diagnosis of HIV infection. Visit <http://www.cdc.gov/hiv/partners/ahp.htm> to see how the initiative will be implemented and to find links to the latest information on rapid HIV testing, perinatal HIV prevention, and *Fundamentals of HIV Testing and Prevention Counseling with the OraQuick Rapid HIV-1 Antibody Test*.❖

Quarterly publication for colleagues and participants of the Performance Evaluation Program for Anti-HIV-1 in Dried Blood Spots.

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PART 1. SCREENING

Table 1.
Screening Methods

Kit Source	Total Participants
Genetic Systems <i>r</i> LAV EIA (Bio-Rad)	7
bioMerieux Vironostika HIV-1 Microelisa System	10
bioMerieux Vironostika Uni-Form II <i>plus</i> O	10
Fujirebio Serodia-HIV	2
Abbott Murex HIV 1+2 Gacelisa	1
Murex HIV 1.2.0	1
Sanofi Diagnostics Pasteur Genelavia Mixt (Bio-Rad)	1
Tecnosuma (Cuba) UMELISA HIV 1+2	1
Other	9
In House	1
Total	43

Table 2.
Number of Labs Reporting Screening Results

Specimen Number	Expected Results	Reactive	Non-reactive	No Interpretation
1541	Reactive	43	0	0
1542	Reactive	42	1	0
1543	Reactive	43	0	0
1544	Non-reactive	0	43	0
1545	Reactive	43	0	0

Table 3.		Specimen Number					Cutoff
Kit Source		1541	1542	1543	1544	1545	Value
Genetic Systems	Range	1.989-3.500	1.515-2.306	2.118-3.500	0.055-0.158	1.519-3.500	0.206-0.294
	Mean	2.499	1.816	2.580	0.105	2.377	0.266
	CDC Results	2.103	1.453	2.080	0.121	1.516	0.306
bioMerieux Vironostika	Range	1.821-3.297	1.366-2.896	1.777-3.264	0.195-0.396	1.904-3.243	0.407-0.546
	Mean	2.669	2.257	2.596	0.279	2.677	0.463
	CDC Results	3.310	2.882	3.386	0.236	3.209	0.509
bioMerieux Vironostika Uni-Form II <i>plus</i> O	Range	1.665-3.665	0.347-2.440	1.846-3.724	0.091-0.140	2.058-3.747	0.150-0.220
	Mean	2.794	1.074	2.845	0.117	2.994	0.193

Use of trade names and commercial sources is for identification only and does not imply endorsement by the U.S. Department of Health and Human Services.

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PART 2. CONFIRMATORY

Table 4.
Confirmatory Methods

Kit Source	Total Participants
Genetic Systems HIV-1 WB (Bio-Rad)	12
Bio-Rad New LAV Blot I	6
OraSure HIV-1 WB Kit	2
Genelab Diagnostics HIV 2.2 WB	2
Cambridge Biotech HIV-1 WB Kit (Calypte)	2
Other	1
Total	25

Table 5.
Number of Labs Reporting Western Blot Results

Specimen Number	Expected Results	Reactive	Non-reactive	Indeterminate	Not Tested
1541	Reactive	25	0	0	0
1542	Reactive	24	0	0	1
1543	Reactive	25	0	0	0
1544	Non-reactive	0	12	0	13
1545	Reactive	25	0	0	0

Table 6.

Specimen 1541

Methods	gp160		gp120		p66		p55		p51		gp41		p31		p24		p18	
	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
CDC (GS HIV-1 Kit, Bio-Rad)	✓		✓		✓		✓		✓		✓		✓		✓		✓	
Genetic Systems HIV-1 Kit (Bio-Rad)	12	0	12	0	12	0	11	1	11	1	12	0	12	0	12	0	11	1
Bio-Rad New LAV Blot I	6	0	6	0	5	1	6	0	5	1	6	0	5	1	5	1	6	0

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PART 2. Continued

Table 6.

Specimen 1542

Methods	gp160		gp120		p66		p55		p51		gp41		p31		p24		p18	
	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
CDC (GS HIV-1 Kit, Bio-Rad)	✓		✓			✓	✓			✓	✓		✓		✓			✓
Genetic Systems HIV-1 Kit (Bio-Rad)	12	0	11	1	12	0	9	3	8	4	12	0	12	0	11	1	2	10
Bio-Rad New LAV Blot I	6	0	5	1	4	2	6	0	4	2	5	1	5	1	5	1	3	3

Table 6.

Specimen 1543

Methods	gp160		gp120		p66		p55		p51		gp41		p31		p24		p18	
	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
CDC (GS HIV-1 Kit, Bio-Rad)	✓		✓		✓		✓		✓		✓		✓		✓		✓	
Genetic Systems HIV-1 Kit (Bio-Rad)	12	0	12	0	12	0	11	1	10	2	12	0	12	0	12	0	10	2
Bio-Rad New LAV Blot I	6	0	6	0	5	1	6	0	5	1	6	0	5	1	5	1	6	0

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PART 2. Continued

Table 6.

Specimen 1545

Methods	gp160		gp120		p66		p55		p51		gp41		p31		p24		p18	
	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
CDC (GS HIV-1 Kit, Bio-Rad)	✓		✓		✓		✓		✓		✓		✓		✓		✓	
Genetic Systems HIV-1 Kit (Bio-Rad)	12	0	12	0	12	0	11	1	10	2	12	0	12	0	12	0	1	11
Bio-Rad New LAV Blot I	6	0	6	0	5	1	6	0	5	1	6	0	5	1	5	1	6	0